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| 10/573,277 | 03/23/2006 | Yoshio Yamazaki | JFE-06-1018 | 9391 |
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| | | | EXAMINER KESSLER, CHRISTOPHER S | |
| | | | ART UNIT 1733 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

Office Action Summary

Application No.

10/573,277

Applicant(s)

YAMAZAKI ET AL.

Examiner

CHRISTOPHER KESSLER

Art Unit

1733

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-9 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-9 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12-7-10
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 October 2010 has been entered.

Status of Claims

2. Responsive to the amendment filed 28 October 2010, claims 7, 9, and 15 are amended. Claims 7-9 and 15-17 are currently under examination.

Status of Previous Rejections

3. Responsive to the amendment filed 28 October 2010, new grounds of rejection are presented.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 7-9 and 15-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Each of independent claims 7, 9 and 15 includes the limitation that the microstructure contains "uniformly elongated soft ferrite." However, this feature is not described in the instant specification.

Each of claims 8 and 16-17 depends on claims 7, 9 and 15, respectively, and is therefore also not described.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 7-9 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process*

Control Corp. v. HydReclaim Corp., 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “uniformly elongated soft ferrite” in claims 7, 9 and 15 is used by the claim to mean “uniformly and isotropic elongated,” while the accepted meaning is “uniformly elongated.” The term is indefinite because the specification does not clearly redefine the term.

Each of claims 8 and 16-17 depends on claims 7, 9 and 15, respectively, and is therefore also indefinite.

8. Claims 7-9 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “uniformly elongated soft ferrite” in claims 7, 9 and 15 is used by the claim to mean “equiaxed,” while the accepted meaning is “uniformly elongated.” The term is indefinite because the specification does not clearly redefine the term.

Each of claims 8 and 16-17 depends on claims 7, 9 and 15, respectively, and is therefore also indefinite.

9. Claims 7-9 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "uniformly elongated soft ferrite" in claims 7, 9 and 15 is a relative term which renders the claim indefinite. The term "uniformly elongated soft ferrite" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In the instant case, there is no description or implication as to what kind or measure of elongation constitutes "uniformly elongated." For example, does "uniform" refer to the elongation of ferrite grains relative to other grains, or does it refer to a shape of a grain or to a type of elongation? The instant specification does not describe "uniformly elongated soft ferrite" at any place, and also applicant's arguments are ambiguous as to what this term means.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 7-9 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,290,789 issued to Toyooka et al. (hereinafter "Toyooka").

Regarding claim 7, Toyooka teaches the invention substantially as claimed. Toyooka teaches a steel pipe having good strength and ductility (see abstract). Toyooka teaches that the pipe comprises 0.06-0.30% C, 0.01-1.5% Si, 0.01-2.0% Mn and 0.001-0.10% Al (see col. 5). Toyooka further teaches that the composition may include Cr up to 2% or Mo up to 1% (see col. 7). Toyooka further teaches that the impurities are limited to 0.01% of N, 0.006% of O, 0.025% of P and 0.02% of S (see cols. 8-9). The compositional ranges of the steel of Toyooka overlap the instantly claimed compositional ranges, establishing a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art at time of invention to have selected a composition within the range as claimed, because Toyooka teaches the same utility over an overlapping range. Applicant is further directed to MPEP 2144.05.

Toyooka does not teach wherein the composition satisfies the equations (1) and (2) as claimed. However, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, *Taklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77, and *In re Pilling*, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those of ordinary skill in the art. *In re Austin, et al.*, 149 USPQ 685, 688. In the instant case, Toyooka teaches a steel with an overlapping compositional range, and it would have been obvious to one of

ordinary skill in the art at time of invention to have made a composition satisfying the equations (1) and (2), because Toyooka teaches the same utility over the entire range of composition.

Toyooka further teaches that the steel pipe may be a seamless steel pipe as is known in the art (see col. 13). The terms "expandable" and "oil country" are statements of intended use for the pipe claimed. The claim preamble must be read in the context of the entire claim. The determination of whether preamble recitations are structural limitations or mere statements of purpose or use "can be resolved only on review of the entirety of the [record] to gain an understanding of what the inventors actually invented and intended to encompass by the claim." *Corning Glass Works*, 868 F.2d at 1257, 9 USPQ2d at 1966. If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999). In the instant case, the terms do not describe a particular structure in the article as claimed. Also, one of ordinary skill in the art would have recognized the utility for seamless steel pipes without an explicit description of said utility in Toyooka for the seamless pipes described.

Toyooka further teaches that the microstructure of the pipe may comprise fine grains of ferrite (soft ferrite) along with a precipitated second phase (see col. 9). Toyooka teaches that the second phase may comprise bainite either alone or in

combination with other phases (see col. 9). Toyooka teaches that the area of the second phase of the microstructure accounts for more than 30% of the total area, preferably between 30 and 60% of the total area (see col. 9). The amount of low temperature transforming phase of the steel of Toyooka overlap the instantly claimed microstructural amount, establishing a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art at time of invention to have selected an amount of second phase within the range as claimed, because Toyooka teaches the same utility over an overlapping range. Applicant is further directed to MPEP 2144.05.

Regarding the limitation of the soft ferrite being "uniformly elongated," Toyooka teaches that the mixed microstructure contributes to the uniform elongation properties of the pipe in the case of deformation (see col. 9). Thus, the term "uniformly elongated" would have been obvious to one of ordinary skill in the art.

Regarding claim 8, Toyooka teaches that the pipe comprises Cu up to 1% or Ni up to 2% (see col. 7), said ranges overlapping the claimed compositional ranges, establishing a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art at time of invention to have selected a composition within the range as claimed, because Toyooka teaches the same utility over an overlapping range. Applicant is further directed to MPEP 2144.05.

Regarding claim 9, Toyooka is applied to the claim as stated above. Toyooka does not teach wherein the composition satisfies the equations (3) and (4) as claimed. However, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, In re Cooper and Foley 1943 C.D.

357, 553 O.G. 177; 57 USPQ 117, Taklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77, and In re Pilling, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those of ordinary skill in the art. In re Austin, et al., 149 USPQ 685, 688. In the instant case, Toyooka teaches a steel with an overlapping compositional range, and it would have been obvious to one of ordinary skill in the art at time of invention to have made a composition satisfying the equations (3) and (4), because Toyooka teaches the same utility over the entire range of composition.

Regarding claim 15, Toyooka is applied to the claim as stated above. Toyooka teaches the steel pipe is heated for hot rolling (see col. 10). Toyooka teaches that the rolling temperature is preferably in a range from 400-750° C (see col. 10). The range with a maximum temperature of 750° C overlaps the instantly claimed range of "about 800°C or more." It would have been obvious to one of ordinary skill in the art at time of invention to have selected a hot rolling temperature within the range as claimed, because Toyooka teaches the same utility over an overlapping range. Applicant is further directed to MPEP 2144.05. Toyooka further teaches examples of steel pipe produced with rolling finish temperature above 800°C (see Tables 4, 6 and 8, for example).

Regarding claim 16, Toyooka teaches that the pipe is cooled after hot rolling (see col. 11). Toyooka teaches that the cooling may be air cooling, and that the cooling rate may be 1° C per second or more (see col. 11). Thus the cooling process of Toyooka

overlaps the claimed step of holding in the region between Ac_1 and Ac_3 for about five minutes or more and then cooling.

Regarding claim 17, Toyooka teaches that the pipe comprises Cu up to 1% or Ni up to 2% (see col. 7), said ranges overlapping the claimed compositional ranges, establishing a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art at time of invention to have selected a composition within the range as claimed, because Toyooka teaches the same utility over an overlapping range. Applicant is further directed to MPEP 2144.05.

Response to Arguments

12. Applicant's arguments filed 28 October 2010 have been fully considered but they are not persuasive.

Applicant further argues that the term "uniformly elongated" actually means "uniformly and isotropic elongated." The examiner disagrees. There is no description of such a term in the specification, much less a description that said term has a different meaning in the context of the invention.

Applicant argues that the term "uniformly and isotropic elongated" is supported in the specification by the terminology in [0052]. The examiner disagrees. The portion of the specification cited by applicant is quite clearly referring to the properties of the steel *vis-a-vis* the uniform elongation test, and is not referring to the soft ferrite structure. Applicant argues that said limitation is supported by paragraph [0053]. The examiner

again disagrees. The examiner acknowledges the teachings of the specification in paragraph [0053], but nowhere in that paragraph is the term "uniformly elongated" used, nor does said paragraph state that the soft ferrite is "uniformly elongated" as claimed. Said paragraph uses entirely different terminology and describes something else.

Applicant further argues that the term "uniformly elongated" refers to "equiaxed" structure. The examiner disagrees. There is no description of such a term in the specification, much less a description that said term has a different meaning in the context of the invention. Additionally, applicant has provided two different definitions for the term "uniformly elongated," and neither of these different meanings is supported by the instant specification. Equiaxed is not the same thing as "uniformly and isotropic elongated," but neither of these special definitions of the claim limitation is to be found in the specification.

Applicant further argues that the structure of the steel pipe of the invention would have been different from the structure of the steel pipe of Toyooka. This argument is not found persuasive because the term "uniformly elongated soft ferrite" is vague and indefinite. See the rejections under section 112, second para. above.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 2003-201543 (cited by applicant) teaches a similar pipe manufacturing process for pipe for automotive applications.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER KESSLER whose telephone number is (571)272-6510. The examiner can normally be reached on Mon-Fri, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Roy King/
Supervisory Patent Examiner, Art
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csk